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HANDS IN NATURE AND ART

HANDS

IN NATURE AND ART

BY
HEIDI LENSSEN

THE STUDIO PUBLICATIONS
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A C K N O W L E D G M E N T S

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INTRODUCTION

EVEN MORE than the surgeon or psychologist, the artist knows how expressive of moods are a person's hands, and how revealing they can be of his inner nature. While the face may obey the will of an individual in masking feeling successfully, the hand is intransigent and incorruptible in exposing the secrets of heart or soul. The giants of literature were aware of this quality and their works are full of allusions: ". . . a hand open as day" Shakespeare says in *Henry IV*, or again in *Henry VI*, "There is no better sign of a brave mind than a hard hand."

More than any other part of the body, the hand is the extension of the mind; the instrument that rivals man's power of speech in expressing that ability to reason which sets him apart in the animal kingdom. The marvelous anatomy of the human hand, as to its combination of strength and flexibility, is only equalled by the foot and the vertebral column. In the human structure, the fineness and complex interrelationship of the eight small bones forming the wrist or carpus, the great number of small but amazingly strong muscular tendons, the complicated nervous system are unique.

In portraiture, the great artists of all eras appreciated the significance of the hand in disclosing the character of their sitters, and many of them used this 'most difficult of all subjects to portray,' to underline, as it were, the expression or mood of the face or the emotion he was trying to evoke on canvas. The hands of a beautiful woman, for instance, will most often reflect an unconscious harmony and grace in perfect keeping with her well proportioned features. They are molded in a balance and exact measure that suggest the flawless structure of a flower, or the spontaneously perfect movements of a lithe animal. Quite often, however, we notice that the hands of an otherwise pretty woman are unattractive, and vice versa. Generosity, avariciousness, honesty, deceit, kindness, cruelty, coarseness, refinement, all these features and many more may be distinctly revealed in the hand and at times even more so than in the face.

No phase of man's life span reflects its station in time with the savage vividness of the hands of the aged laborer. Tired and

resigned, they show the ravages of a lifetime of manual work in the deformity of their muscles and joints; while the unending strain of daily tasks have made their veins stand out so boldly as to seem almost ready to burst.

The praying hands of Albrecht Dürer and Hans Memling express the humility of the worshipper while the mighty hand of God is envisioned with awe in Michelangelo's "The Hands of God Creating" and Rodin's "The Hands of God."

The creative spirit is also embodied in the hands of artists and writers, of dancers and musicians. In the case of the musicians, their fingers clearly comprise a sensitive, skilled instrument; they are so obviously the inspired messengers of the spirit's most subtle moods that one might say they *belong* to music.

Included in the book also are hands of men of action, like the soldier and the sportsman, as well as the more reflective hands of statesmen and politicians. Then, too, there are the hands of children.

In our recorded history of civilized man, nature has remained constant, repeating herself endlessly. The hand of the sleeping Barberini Faun, cut out of Grecian stone three hundred and fifty years before Christ, might be that of a young man of to-day. Yet, different periods in history have been distinguished by different ideals and beliefs which are reflected in the art of each epoch. We find symbolic, somber abstractions of the Egyptian hands, while those of the ancient Greek reflect harmonious "classic" perfection. The spiritual ardor of the early middle ages is shown in the yearning, worshipping hands their artists created.

In glancing backward to the very beginning of our known civilization, I find sketches drawn on stone walls by early tribes in Greece 2400 years ago. While comparing these hands with those created by some contemporary artists, it seems that the circle of moods and desires is drawing to a close or is it a beginning? It is my hope, in any event, that this spotlight on hands may be an inspiration to many and a challenge to my fellow artists, for however symbolic contemporary taste may be, it is essential that every true artist know the structure, the texture, the movement and the outward form of hands, as well as realizing the inner qualities they express.

TECHNICAL NOTES

The Bone Structure of the Hand

The skeleton of the hand is composed of the wrist or carpus, the bones of the palm or metacarpus and the bones of the fingers or phalanges, which in their turn are subdivided into first, second and third phalanx.

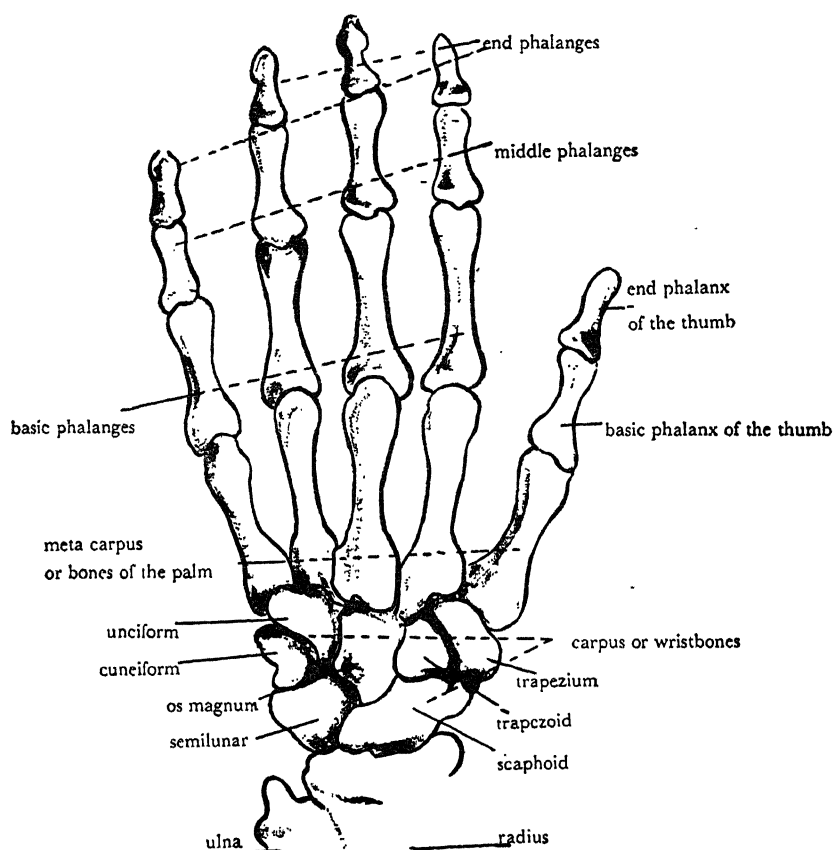
The eight small bones which form the extremely flexible wrist bear the following names: scaphoid, semilunar, pisiform, cuneiform, unciform, os magnum, trapezoid, trapezium.

The lower part or row of the wrist, consisting of the scaphoid, semilunar and pisiform and cuneiform together with the lower heads of the arm bones, the ulna and the radius, form the joint between arm and hand.

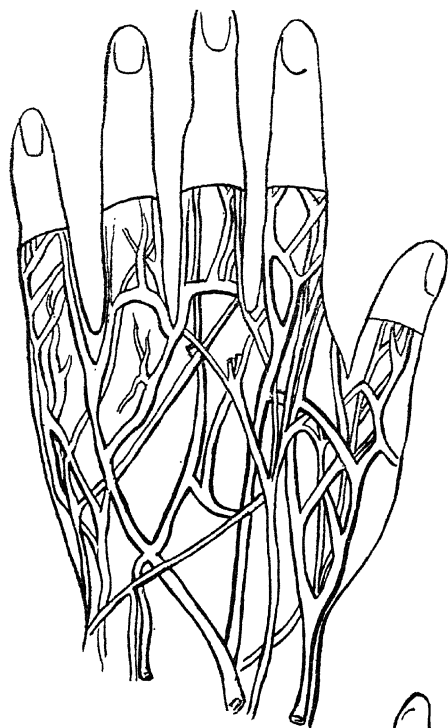
The upper row of the carpus bones consisting of the unciform, os magnum, trapezoid and trapezium is fitted directly into the lower ends of the bones of the palm or metacarpus. The palm bone leading up to the thumb rests on the trapezium, while the unciform offers the base for the ring finger and the little finger together. The trapezoid joins the lower end of the palm bone which leads up to the forefinger, while the os magnum, which is, as the name implies, the biggest of the eight small bones, is the foundation for our longest and strongest hand bone leading up to the middle finger.

The pisiform which is only visible at the inner part of the wrist is the smallest of the carpus bones. All carpus bones are tied together by strong annular ligaments; this structure, together with the joints of the metacarpus bones, makes for the flexibility of the wrist in a circular motion, or in other words, in all directions. The five metacarpus bones, shaped like slightly curved-cylinders, are also held together by strong ligaments. The four phalanges (finger bones) consist each of three parts: the basic phalanx, the middle phalanx and the upper or end phalanx. The lower heads of the basic phalanges, together with the upper heads of the metacarpus bones, form the clearly visible row of knuckles or joints from which all five fingers arise.

The drawings on these two pages represent the bone structure and the vein and muscle systems of the back of the hand. For the student to become well acquainted with the anatomy of the hand, it is suggested that he trace on thin paper both the veins and the muscles shown on the opposite page and lay these separately over the skeleton below, and vice versa. (See pages 10, 11 for the palm of the hand.) The renderings of surface veins and muscles are made of those which contribute to the outer appearance of the hand only. More detailed diagrams, not essential to the artist, which cover the complete anatomy of the hand, may be found in treatises used by the medical profession.

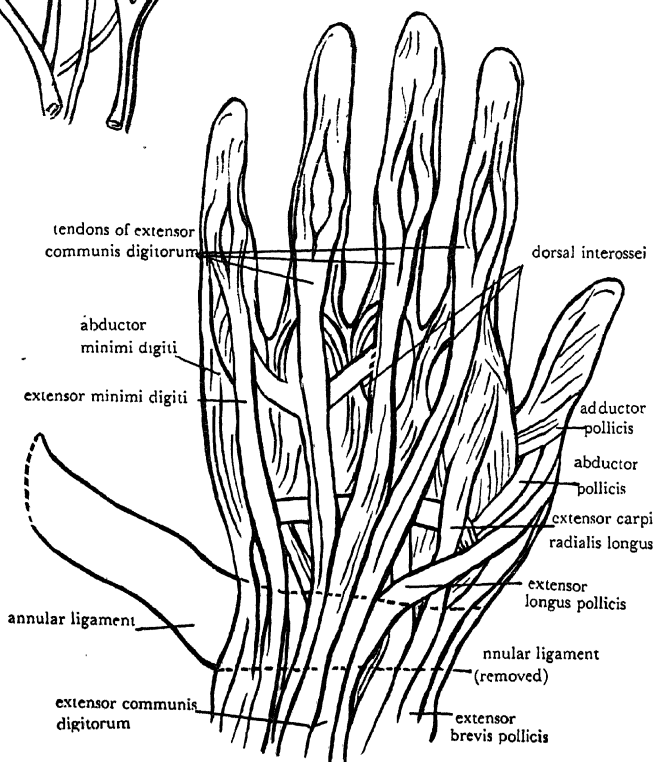


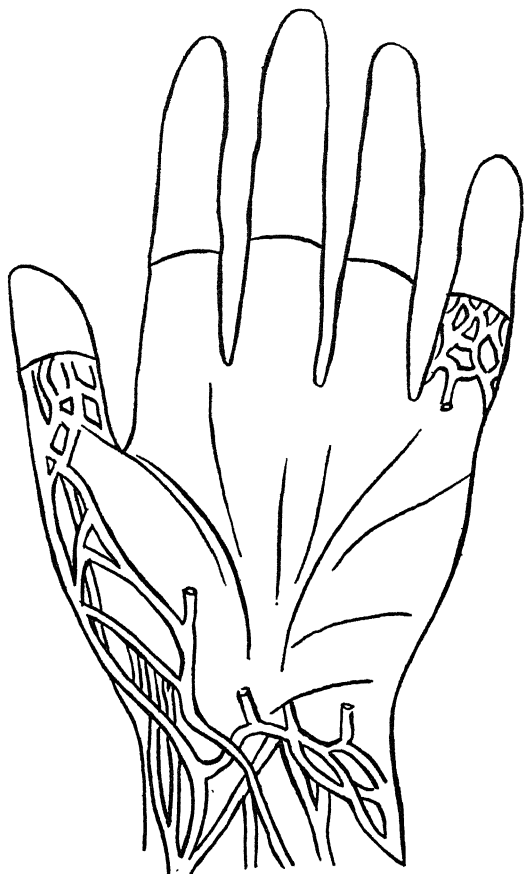
Dorsal (Back) View of Skeleton



Dorsal (Back) View of Surface Veins

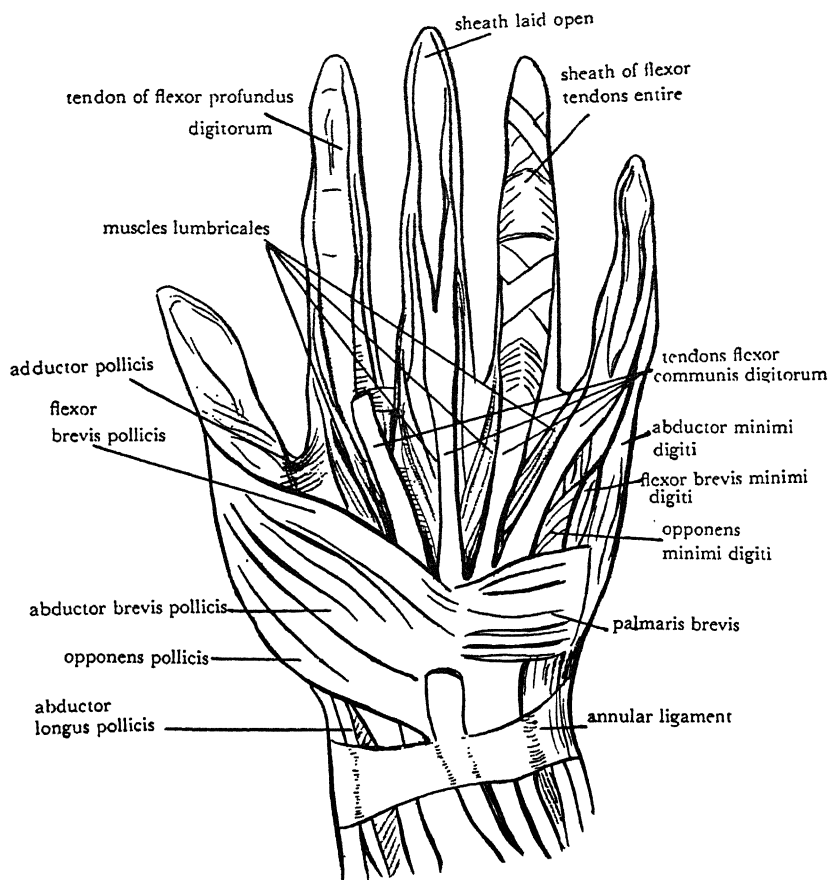
*Below: Dorsal (Back) View of
Surface Muscles*





Volar (Palm) View of Surface Veins

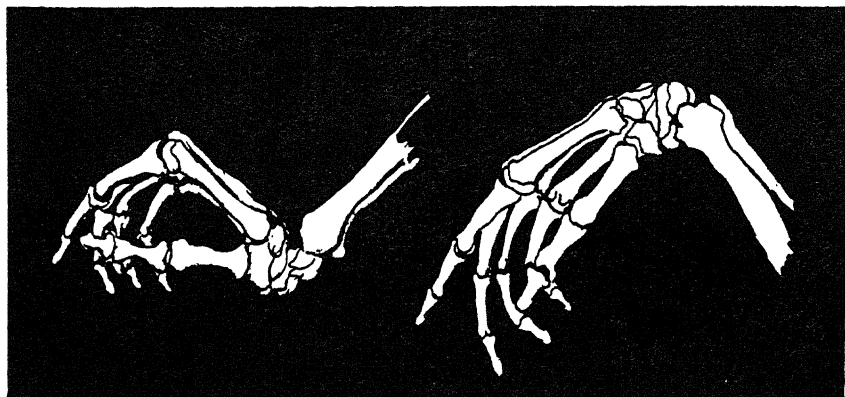
All bones of the fingers are constructed alike: the back portions are slightly convex, while the front parts facing the inner palm are flat and slightly concave. The best way of establishing the length of the hand in relation to its width is to observe the following: the joint from which the middle finger arises divides the length of the hand into two equal parts which in their turn are equal to the width between the inner and the outer edges measured from the forefinger to the little finger. Albrecht Dürer's proportions for the hand are shown in the diagram on page 13.



Volar (Palm) View of Surface Muscles

The normal length of the hand is equal to the length of the face, measured from chin to hairline.

It may be of interest to point out that the most obvious difference between the human hand skeleton and that of the ape is the more outspoken development of the thumb and the forefinger in the human hand. The thumb of the human normally reaches up to the second joint of the forefinger while that of the ape only measures up to the length of the first forefinger joint. The ape's forefinger is shorter than the fourth.



Movements of the Wrist (After Dr. J. Kollman, 1910)

Muscles of the Hand

The muscles of the hand are divided into three groups:

Muscles of the palm

Muscles of the thumb, or pollicis

Muscles of the little finger, or minimi digiti.

1) *Muscles of the Palm*. There are the four muscles *lumbricales* which arise from the *flexor communis digitorum* and are attached to the inner edges of the basic phalanges. Their function is to bend all basic joints of the four fingers.

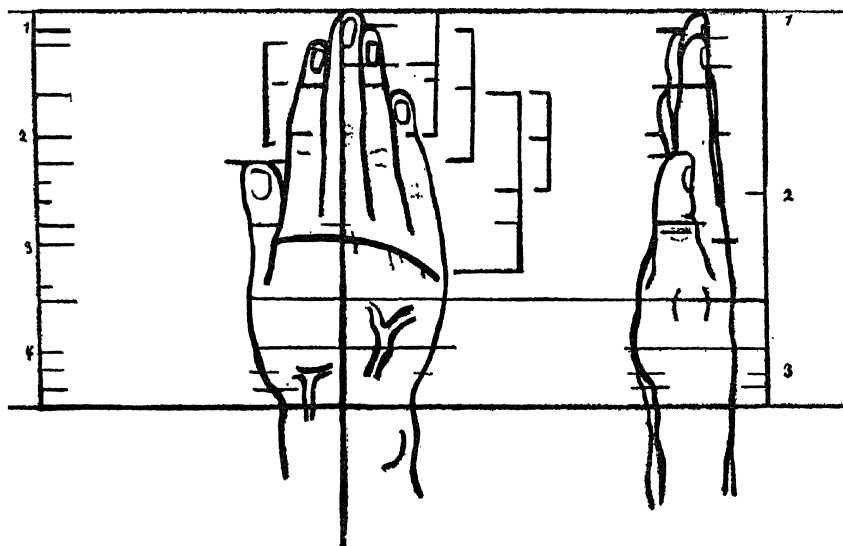
There are also the four tendons of the *flexor sublimis digitorum* muscle which arises from the humerus (upper arm bone), the radius and the ulna, and is attached with four strong tendons to each middle phalanx of the four fingers. The function of this muscle is to bend the middle phalanges.

2) *Muscles of the Thumb (pollicis)*. These consist of: a) The *abductor pollicis brevis* which arises from the annular ligament and is attached to the basic phalanx of the thumb. Its function is to stretch the thumb outward. b) The *flexor pollicis brevis* which bends the thumb in its joint. It arises from two heads which are attached to the annular ligament and to three little carpus bones

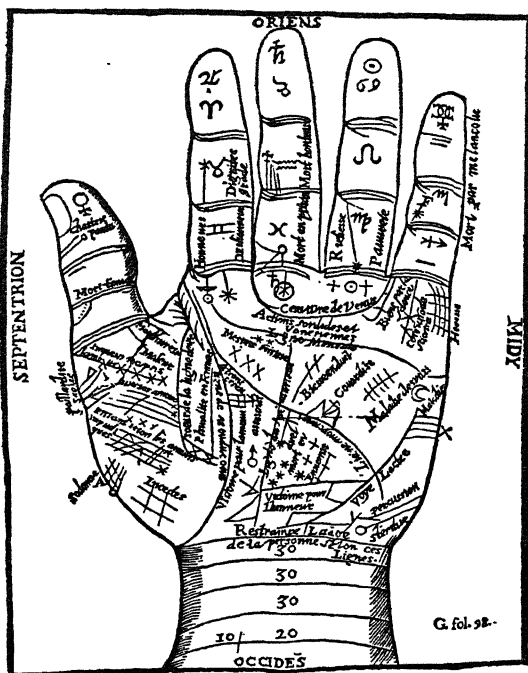
(unciform, os magnum, trapezium). It is attached to the middle joint of the thumb. c) The *opponens pollicis* which pulls the thumb into opposite position to the forefinger. It arises from the ligament and the trapezium and is attached to the metacarpus bone of the thumb. d) The *adductor pollicis* which pulls the thumb into parallel position with the forefinger. It arises from the metacarpal bone of the middle finger and is attached to the basic joint of the thumb.

3) *Muscles of the Little Finger (minimi digiti)*. These consist of: a) The *abductor minimi digiti* which arises from the pisiform bone and is attached to the basic phalanx of the little finger. It stretches the little finger outward. b) The *flexor minimi digiti* which bends the finger. It arises from the annular ligament and is attached to the basic phalanx. c) The *opponens minimi digiti* which also arises from the ligament and the unciform and is attached to the metacarpal bone of the little finger. It pulls the little finger toward the thumb.

There are also the four *interossei dorsales* (of the back of the hand) and the three *interossei volares* (of the palm). The four in-



Hand Proportions (After Albrecht Dürer, 1471-1528)



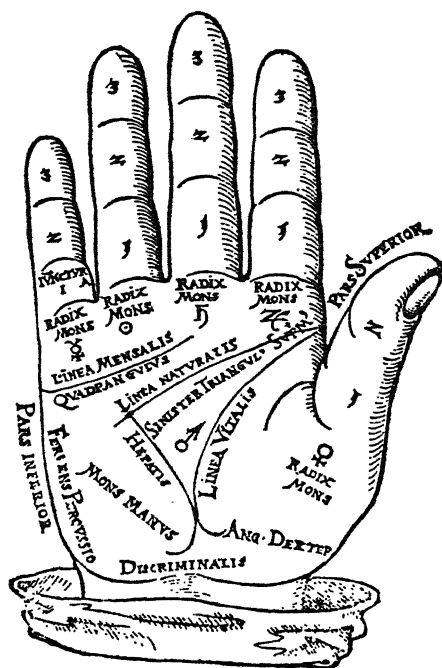
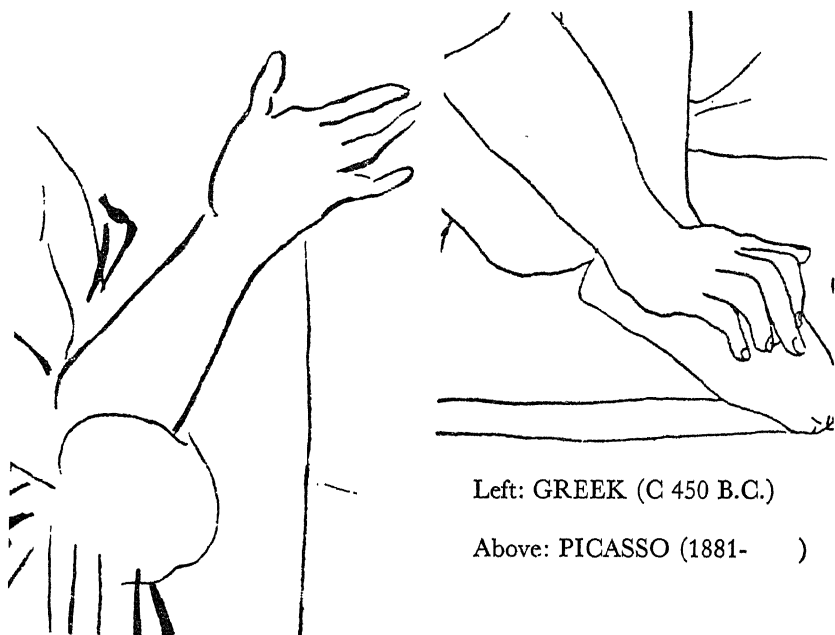


Diagram of the Right Hand (After Tricassus)

each for the second finger, the third finger and the forefinger, and two tendons for the little finger. Plainly visible (more so in the male than in the female wrist) is the lower head of the *ulnar* which together with the radius (two bones of the lower arm) and the carpus bones form the wrist. Of equal importance are the tendons of the *extensor digitorum* leading up to the four fingers. These tendons are more heavily marked in the male hands and especially in those of the athlete or laborer. Of great importance, too, is the position of those marks formed by the joining of the *metacarpals* and the *basic phalanges*. In the more fleshy female hand, and uppermost in the hand of the small child, we find dimples instead of the bony structure contour which is hidden by the abundant fatty substance. In older hands, of course, the formation of veins show most clearly.

In the palm of the hand, an important landmark is the shape of the *pisiform* bone, suggested at the inner part of the wrist. The upper head of the *metacarpal* bone of the thumb is also clearly visible and should be taken into special account. As to the *lines* in the palm of the hand, the principal ones are shown in the diagrams on pages 14 and 15. The subject represented by these diagrams, however, does not come within the scope of this book. There are already many treatises on chiromancy, and the interested reader is advised to make a separate study and come to his own conclusions about the highly controversial subject of fortune telling and, beyond a certain degree, of character analysis based on the direction and strength or weakness of lines in the palm of the hand. From the point of view of drawing or painting, only the principal formation and markings of the skin and its texture need special study and this can only be done directly from life.

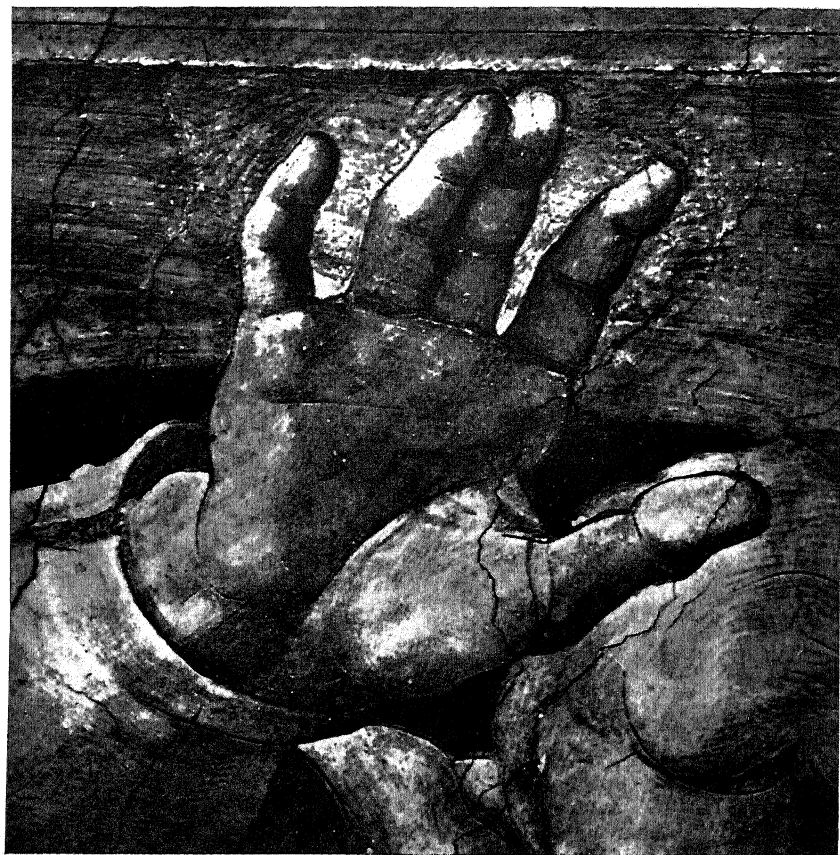


Left: GREEK (C 450 B.C.)

Above: PICASSO (1881-)

Opposite Page: MICHELANGELO (1475-1564)







Top Left: BRONZINO (1502-1572)



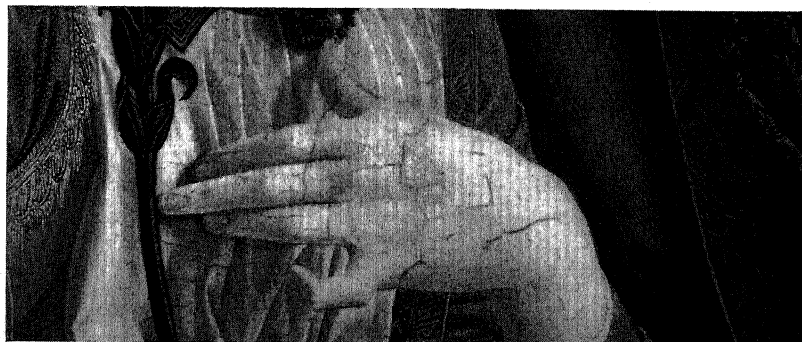
Top Right: RENI (1575-1642)

Center: BOTTICELLI (1444-1510)

Below: VERROCCHIO (1435-1488)

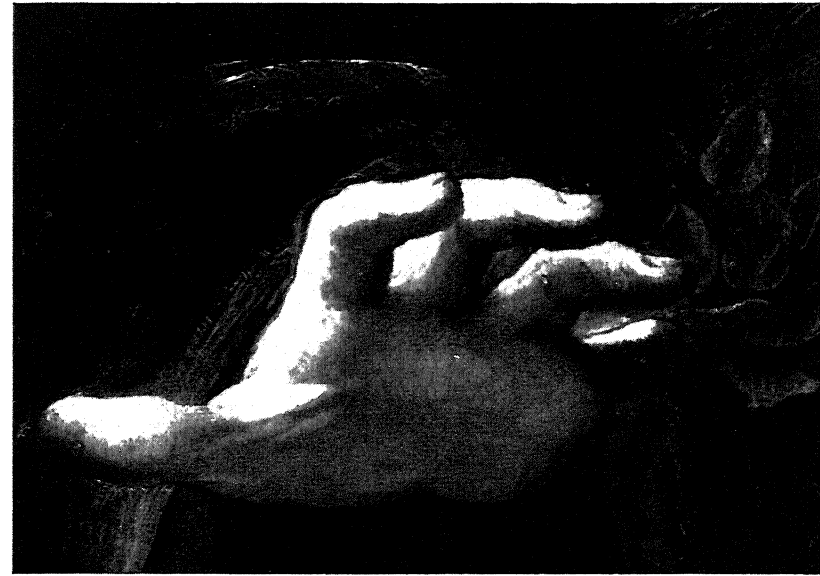
Opposite Page, Top:
MICHELANGELO (1475-1564)

Opposite Page, Bottom:
TINTORETTO (1518-1594)





EL GRECO (1541-1614)



LEONARDO DA VINCI (1452-1519)



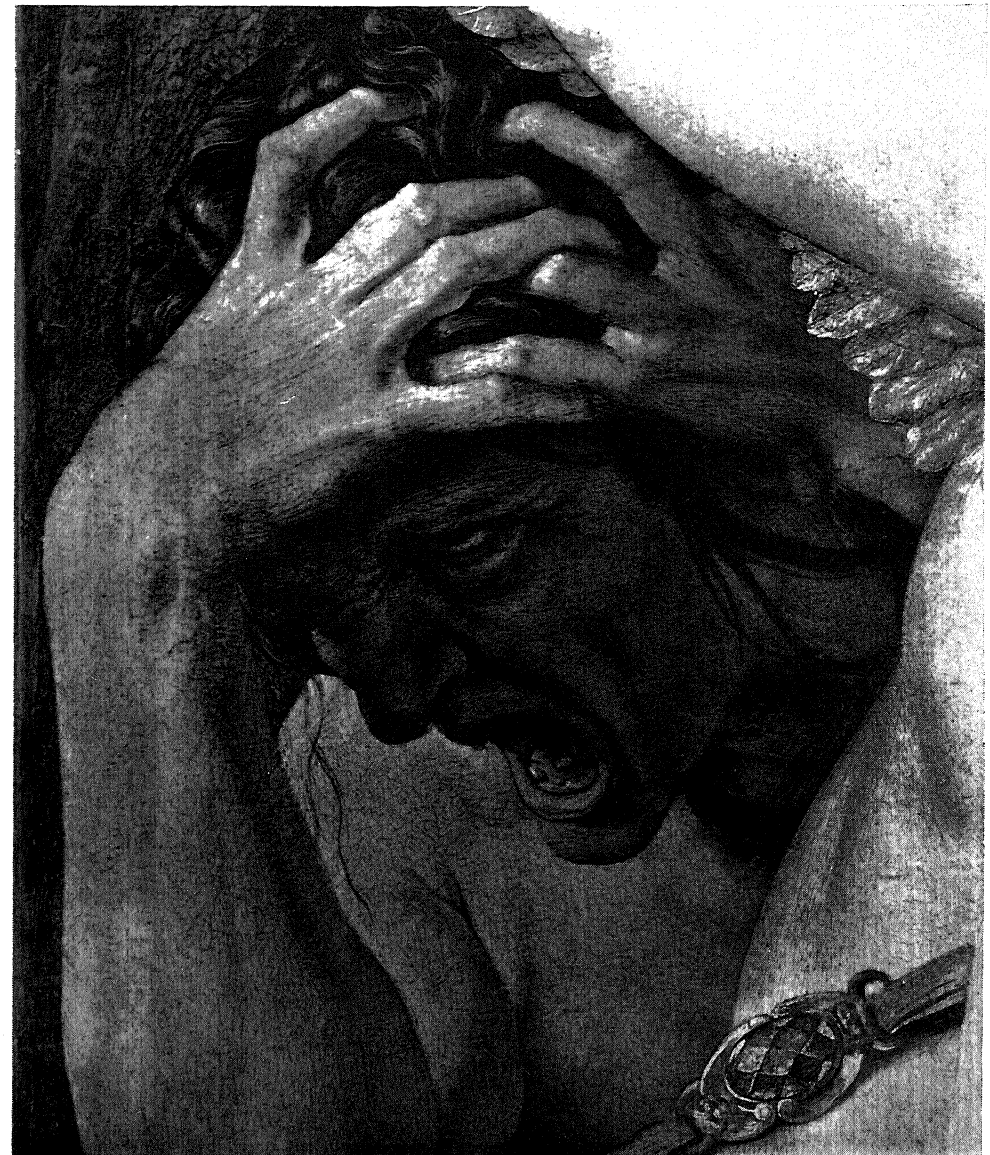
MICHELANGELO (1475-1564)



MICHELANGELO (1475-1564)

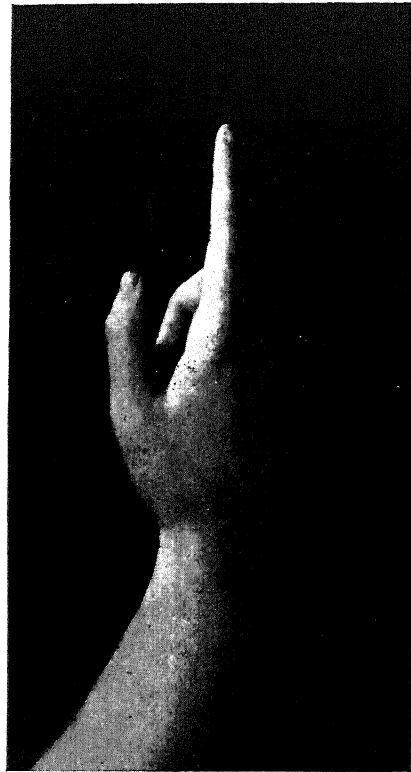
HANDS OF MARTHA GRAHAM

PHOTO: KEN JOHNSON



BRONZINO (1502-1572)

LEONARDO DA VINCI (1452-1519)



FRANCESCO DEL COSSA (1435-1477)



DÜRER
(1471-1528)



J. L. DAVID (1748-1825)

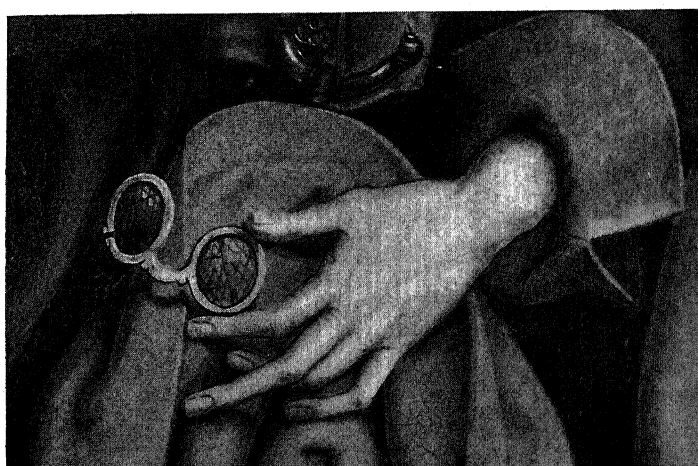


GREEK (350 B.C. COPY)



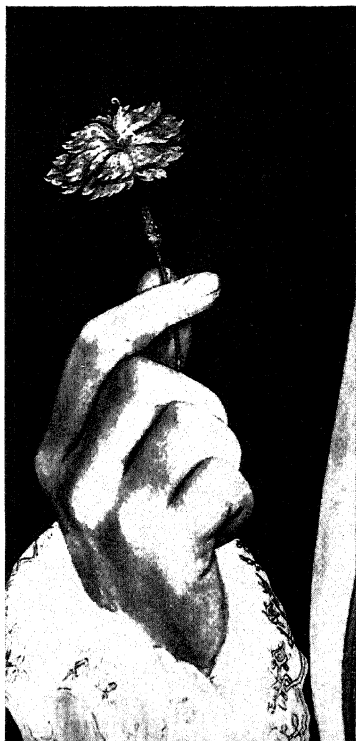
TITIAN (1477-1576)

MASTER OF S. BARTHOLOMEW (1490-1530)



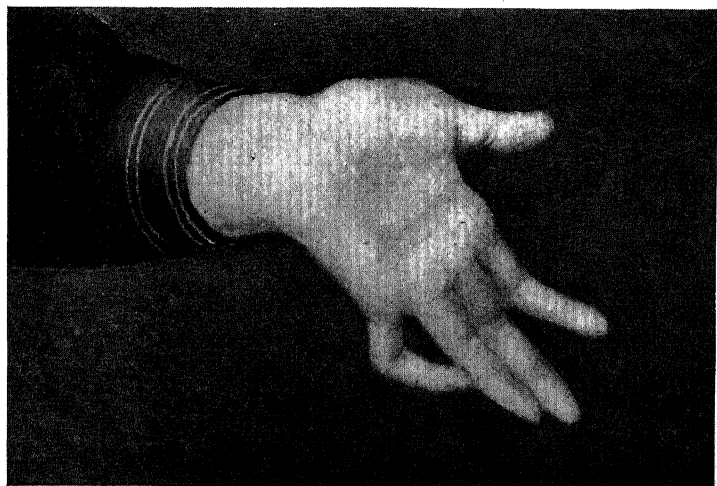


MASTER OF S. BARTHOLOMEW
(1490-1530)



HOLBEIN (1497-1543)

RAPHAEL (1483-1520)



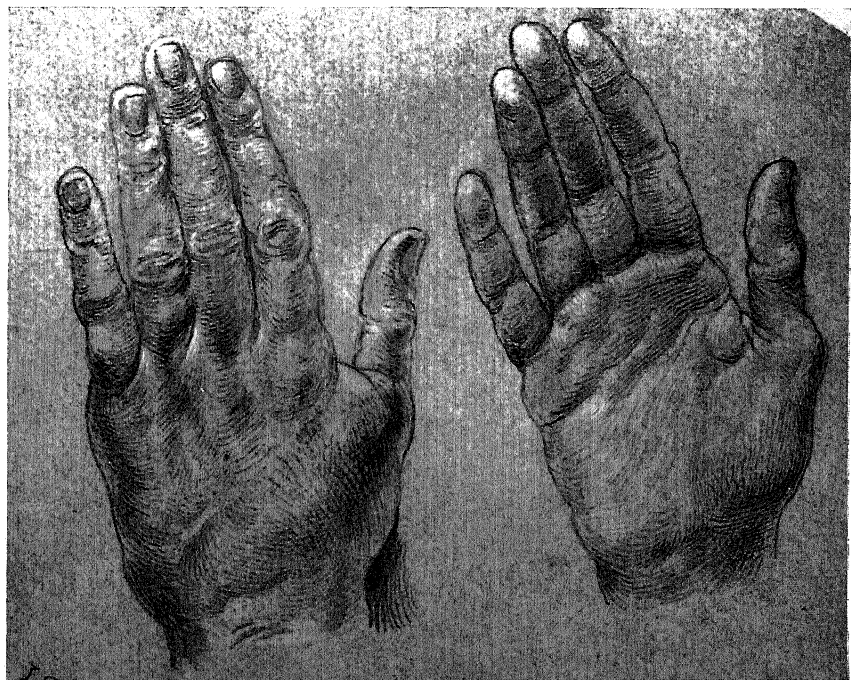


LEONARDO DA VINCI (1452-1519)



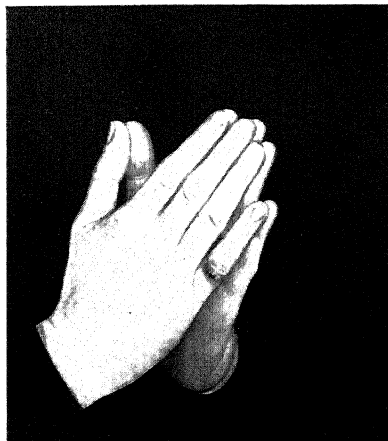
MATTEO DI GIOVANNI DI BARTALO (1430-1495)

DÜRER (1471-1528)

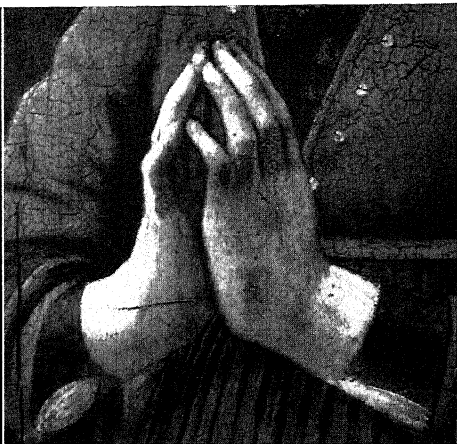




HAND OF BUDDHA (CHINESE, T'ANG DYNASTY) PHOTO: TET BORSIG

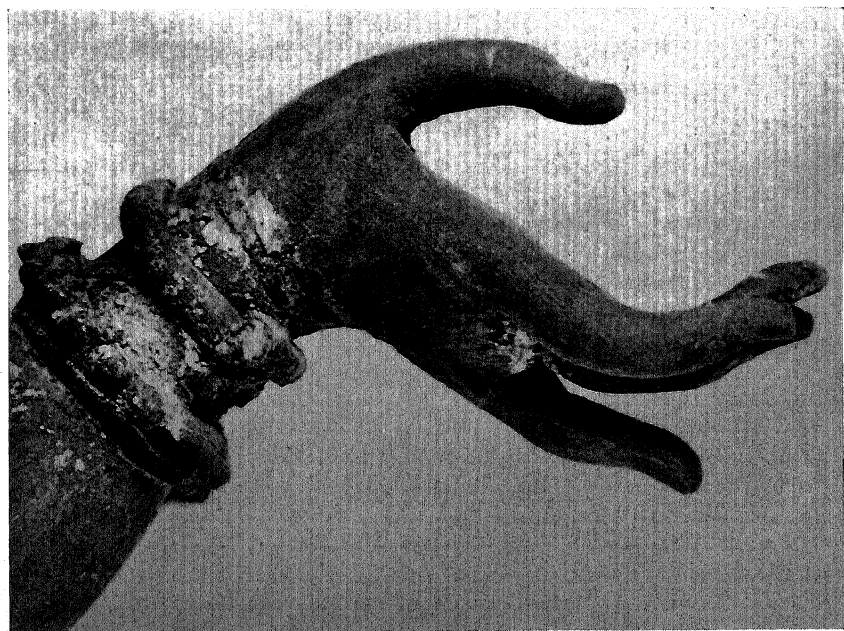


MEMLING (1430?-1495)



FRANCESCA (1420-1492)

HAND OF APSARA (VIITH CENTURY)



INGRES
(1780-1867)



J. L. DAVID (1748-1825)





RUBENS (1577-1640)

HOLBEIN (1497-1543)



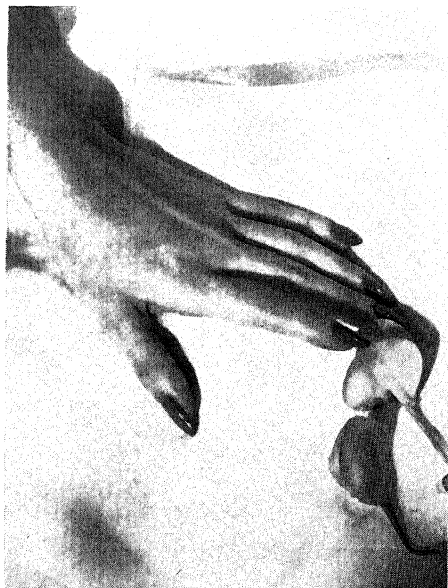


PHOTO: C. W. HUSTON



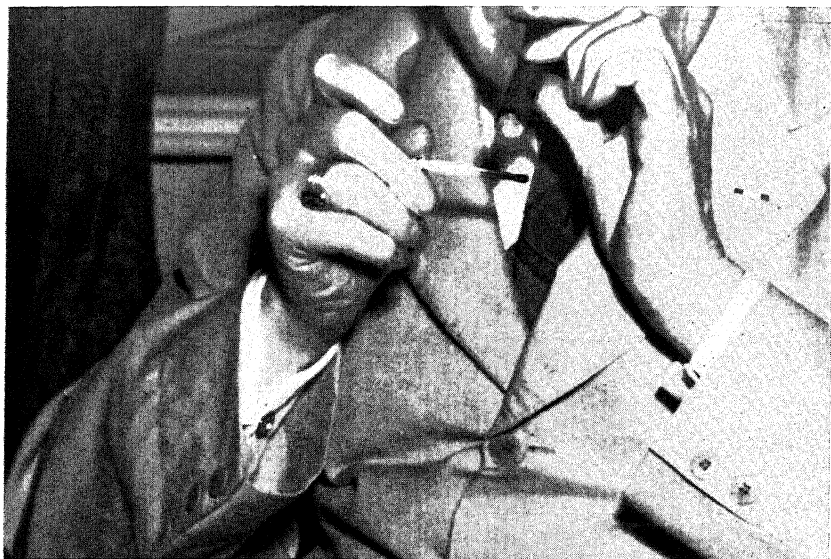
PHOTO: C. W. HUSTON



HAND OF MARKOVA
PHOTO: RAWLINGS



VELAZQUEZ (1599-1660)



HANDS OF WINSTON CHURCHILL

PHOTO: ACME

Opposite Page, Top: HANDS OF JAMES FARLEY

PHOTO: ACME

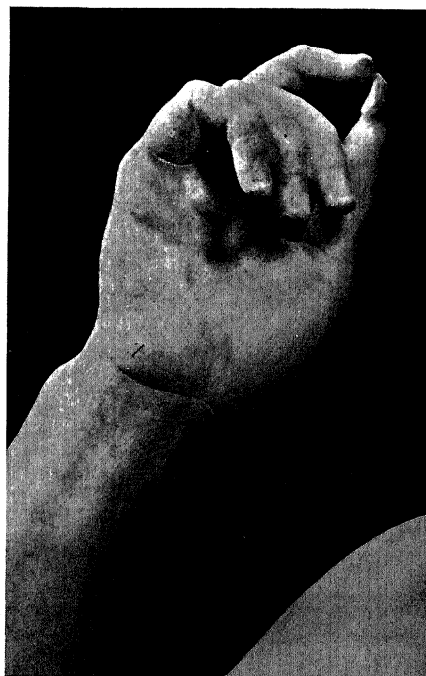
HANDS OF DEAN ACHESON

PHOTO: ACME



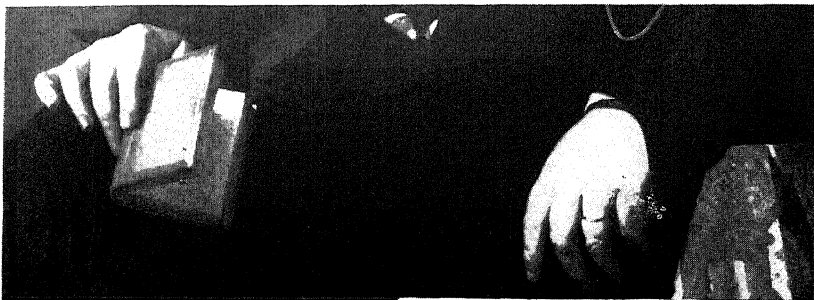


ROMAN (100-50 B.C.)



HOLBEIN (1497-1543)

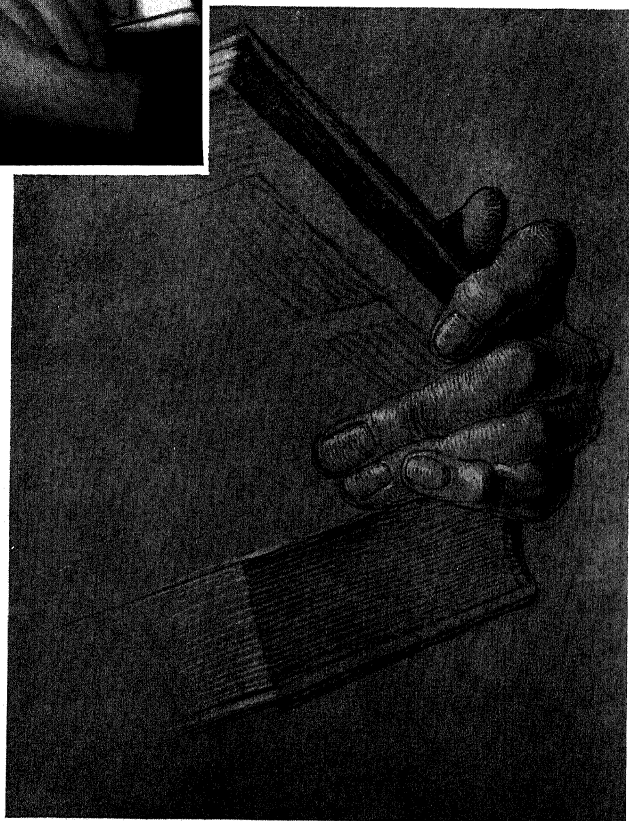




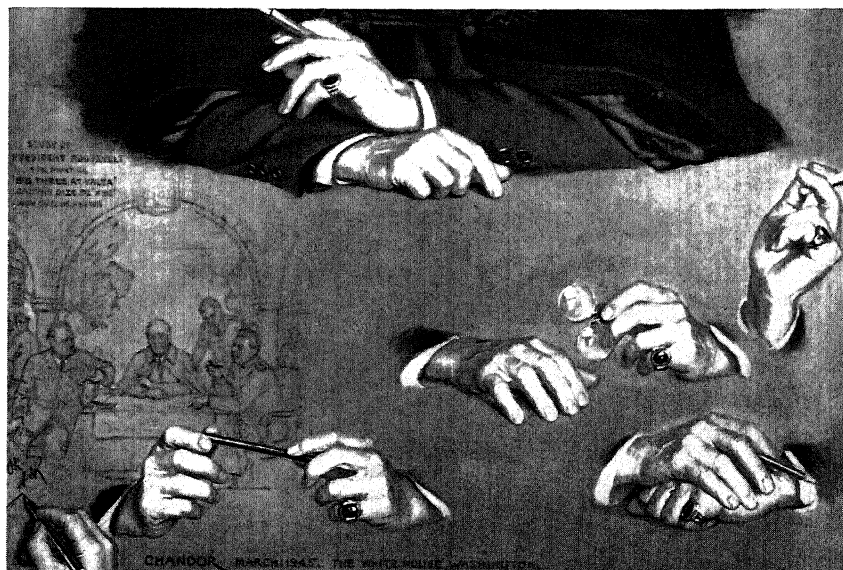
INGRES (1780-1867)



RAPHAEL (1483-1520)



DÜRER
(1471-1528)



HANDS OF FRANKLIN D. ROOSEVELT

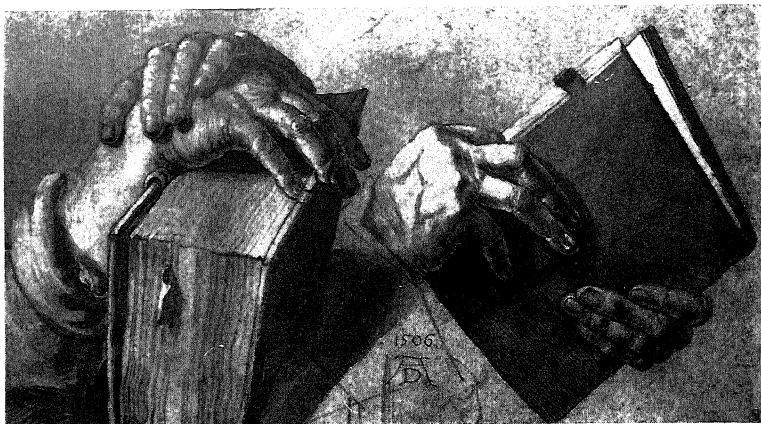
DOUGLAS CHANDOR



Karsh, Ottawa

HANDS OF ELEANOR ROOSEVELT

PHOTO: KARSH



DÜRER (1471-1528)

VELAZQUEZ (1599-1660)





HANDS OF BOOTH TARKINGTON

PHOTO: C. W. HUSTON



MARINUS VAN REYMERSWAEL (?-1493)



HANDS OF ARTHUR RUBINSTEIN

HANDS OF ISAAC STERN



*Photos on this
page courtesy;
S. Hurok*



HANDS OF BENJAMIN BRITTEN

PHOTO: LOTTE JACOBI



HANDS OF
LEOPOLD
STOKOWSKI

*(Photo courtesy:
S. Hurok)*



VAN DYCK (1599-1641)



PHOTO: C. W. HUSTON

HANDS OF DIEGO RIVERA

PHOTO: FRITZ HENLE



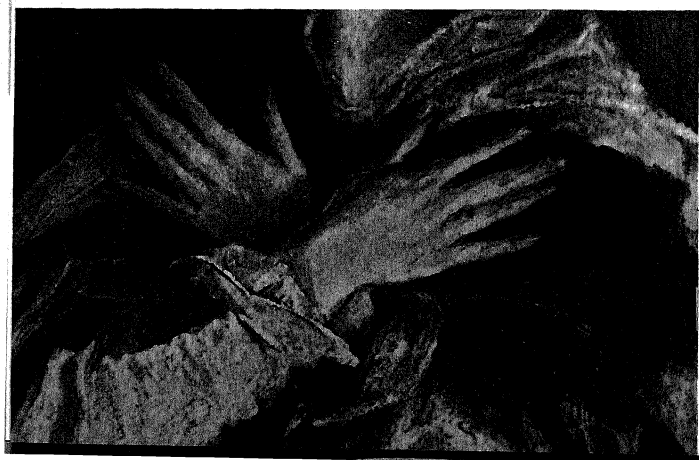
Opposite Page:
MICHELANGELO
(1475-1564)





EL GRECO (1541-1614)

Opposite Page, Top: RODIN (1840-1917), Bottom: DÜRER (1471-1528)



EL GRECO
(1541-1614)





PHOTO: ACME



RODIN (1840-1917)

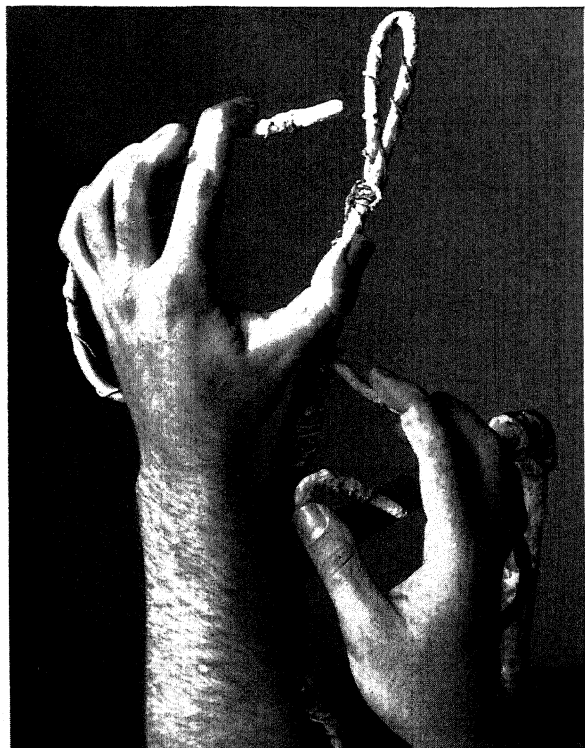
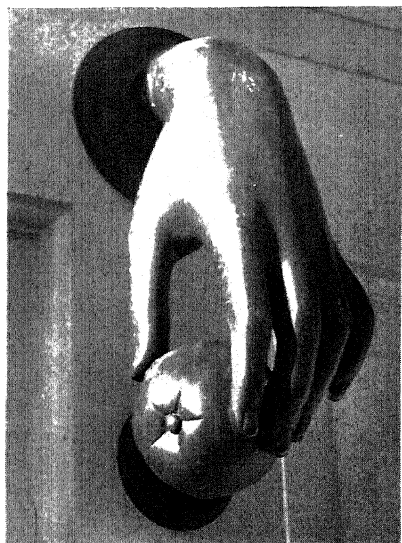


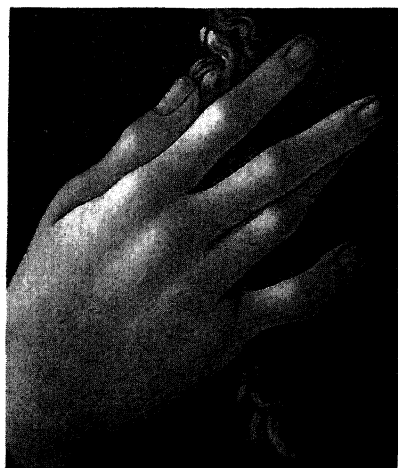
PHOTO: KEN JOHNSON



HANDS WITH PERSIAN VASE



CUBAN DOOR KNOCKER (c. 1700)
PHOTO: FRITZ NEUGASS

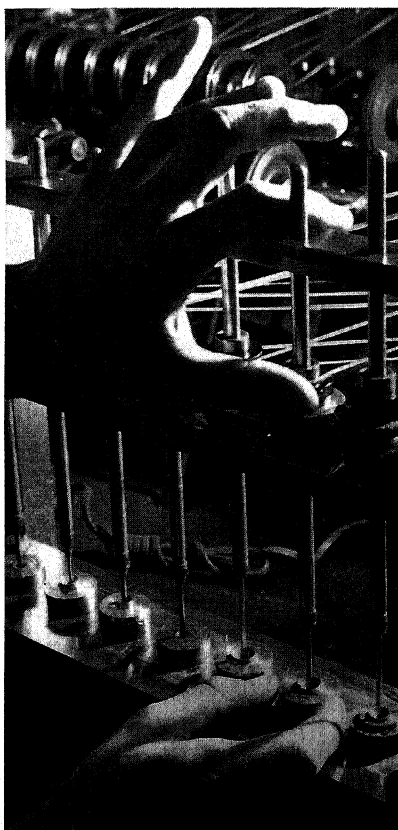


BOTTICELLI (1444-1510)

PHOTO: ACME



PHOTO: FRITZ HENLE



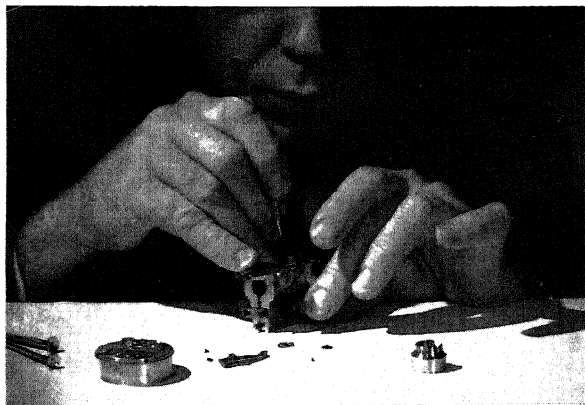


PHOTO:
C. W. HUSTON



HAND OF
DR. RUDOLF NISSEN

PHOTO:
C. W. HUSTON



CAMPI (ATTRIB-
UTED) (1477-1536)



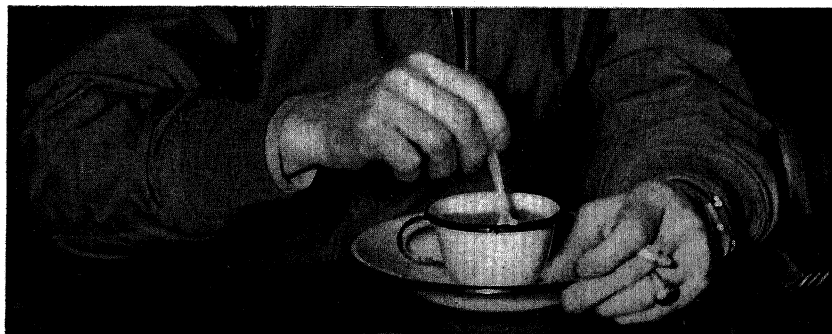
BRONZINO (1502-1572)

MATTEO DI GIOVANNI
(1155)



HANDS OF GENERAL EISENHOWER

PHOTO: ACME



POLLAIUOLO (1429-1498)



ASSYRIAN BAS RELIEF
(885-860 B.C.)

RUBENS (1577-1640)







PHOTO: ACME

Opposite Page, Top: PHOTO: KEN JOHNSON, Bottom: HANDS OF JIMMY DEMARET. PHOTO: ACME

GREEK (300 B.C.)





RAPHAEL (1483-1520)

PHOTO: "LIFE"

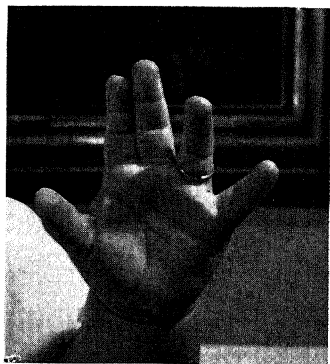


PHOTO: TET BORSIG





MICHELANGELO
(1475-1564)



PHOTO: "LIFE"

HOLBEIN (1497-1543)





PHOTO: FRITZ HENLE

Opposite Page, Center: REMBRANDT (1606-1669)

PHOTO: TET BORSIG

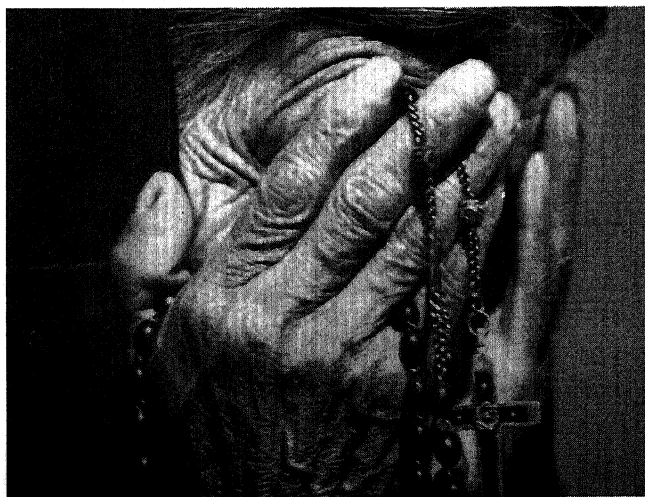




REMBRANDT (1606-1669)



PHOTO: LUIS LEMUS





REMBRANDT (1606-1669)

Opposite Page, Top: GREEK (c. 400 B.C. ROMAN COPY)



HANDS OF JANE WYMAN





TITIAN (1477-1576)

Opposite Page: Top:
GOYA (1746-1828)

TITIAN (1477-1576)





Below Left: REMBRANDT (1606-1669). Right: HALS (1580-1666)





GRECO-ROMAN

PROPERTY OF UNIVERSITY
OF WASHINGTON LIBRARIES
GRADUATE READING ROOM
NON-CIRCULATING

PROPERTY OF UNIVERSITY
OF WASH. LIBRARIES
GRADUATE ROOM
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